

## Refine Search

### Search Results -

Terms	Documents
L9 and L13	1

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L14

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### Search History

 DATE: Monday, February 02, 2004    [Printable Copy](#)    [Create Case](#)

#### Set Name Query

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<u>L14</u>	19 and L13	1	<u>L14</u>
<u>L13</u>	111 and L12	2969	<u>L13</u>
<u>L12</u>	plant growth enhancement and L10	390110	<u>L12</u>
<u>L11</u>	514/12.ccls.	3871	<u>L11</u>
<u>L10</u>	800/298.ccls.	1276	<u>L10</u>
<u>L9</u>	17 and L8	11	<u>L9</u>
<u>L8</u>	L5 and fragment	55594	<u>L8</u>
<u>L7</u>	14 and L6	12	<u>L7</u>
<u>L6</u>	L5 and l3	316	<u>L6</u>
<u>L5</u>	hypersensitive reponse elicitor protein	146500	<u>L5</u>
<u>L4</u>	530/350.ccls.	8124	<u>L4</u>
<u>L3</u>	800/288.ccls.	319	<u>L3</u>
<u>L2</u>	6235974.pn.	1	<u>L2</u>
<u>L1</u>	6277814.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L7 and L8	11

Database:

- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
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- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search:

L9

Refine Search

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result set

DB=USPT; PLUR=YES; OP=OR

<u>L9</u>	17 and L8	11	<u>L9</u>
<u>L8</u>	L5 and fragment	55594	<u>L8</u>
<u>L7</u>	14 and L6	12	<u>L7</u>
<u>L6</u>	L5 and l3	316	<u>L6</u>
<u>L5</u>	hypersensitive reponse elicitor protein	146500	<u>L5</u>
<u>L4</u>	530/350.ccls.	8124	<u>L4</u>
<u>L3</u>	800/288.ccls.	319	<u>L3</u>
<u>L2</u>	6235974.pn.	1	<u>L2</u>
<u>L1</u>	6277814.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

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NEWS	4	DEC 08	INPADOC: Legal Status data reloaded
NEWS	5	SEP 29	DISSABS now available on STN
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NEWS	7	OCT 21	BIOSIS file reloaded and enhanced
NEWS	8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS	9	NOV 24	MSDS-CCOHS file reloaded
NEWS	10	DEC 08	CABA reloaded with left truncation
NEWS	11	DEC 08	IMS file names changed
NEWS	12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS	13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAPlus
NEWS	14	DEC 17	DGENE: Two new display fields added
NEWS	15	DEC 18	BIOTECHNO no longer updated
NEWS	16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS	17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS	18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS	19	DEC 22	ABI-INFORM now available on STN
NEWS	20	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS	21	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAPlus
NEWS EXPRESS			DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
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FILE 'HOME' ENTERED AT 17:35:33 ON 02 FEB 2004

=> file medline, uspatful, dgene, wpids, fsta, biosis, COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	0.42

FILE 'MEDLINE' ENTERED AT 17:36:34 ON 02 FEB 2004

FILE 'USPATFULL' ENTERED AT 17:36:34 ON 02 FEB 2004  
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=> s hypersensitive response elicitor protein and fragment  
L1 26 HYPERSENSITIVE RESPONSE ELICITOR PROTEIN AND FRAGMENT

=> d l1 ti abs ibib tot

L1 ANSWER 1 OF 26 USPATFULL on STN  
TI Hypersensitive response elicitor-induced stress resistance  
AB The present invention is directed to imparting stress resistance to plants. This can be achieved by applying a hypersensitive response elicitor in a non-infectious form to plants or plant seeds under conditions effective to impart stress resistance to plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding the elicitor can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart stress resistance to plants or plants grown from the plant seeds.

ACCESSION NUMBER: 2004:20721 USPATFULL  
TITLE: Hypersensitive response elicitor-induced stress resistance  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
Schading, Richard L., West Melbourne, FL, UNITED STATES

	NUMBER	KIND	DATE
-----			
PATENT INFORMATION:	US 2004016029	A1	20040122
APPLICATION INFO.:	US 2003-441736	A1	20030520 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 1999-431614, filed on 2 Nov 1999, GRANTED, Pat. No. US 6624139		

	NUMBER	DATE
-----		
PRIORITY INFORMATION:	US 1998-107243P	19981105 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051	
NUMBER OF CLAIMS:	14	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2914	

L1 ANSWER 2 OF 26 USPATFULL on STN

TI Pseudomonas syringae harpins, HopPtoP and HopPmaHpto, and their uses  
AB The present invention is directed to isolated proteins or polypeptides which elicit a hypersensitive response in plants, as well as isolated DNA molecules which encode the hypersensitive response eliciting proteins or polypeptides. These isolated proteins or polypeptides and the isolated DNA molecules can be used to impart disease resistance, stress resistance, and enhanced growth to plants or plants grown from treated seeds, to control insects on plants or plants grown from treated plant seeds, to impart post-harvest disease or desiccation resistance in fruits or vegetables, to impart enhanced longevity of fruit or vegetable ripeness, to impart desiccation resistance to cuttings of ornamental plants, and/or promote early flowering of ornamental plants, either by topical application of the proteins or polypeptides or transgenic expression in recombinant plants or plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:8546 USPATFULL  
TITLE: Pseudomonas syringae harpins, HopPtoP and HopPmaHpto, and their uses  
INVENTOR(S): Collmer, Alan, Ithaca, NY, UNITED STATES  
Ramos, Adela, Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004006789	A1	20040108
APPLICATION INFO.:	US 2003-355956	A1	20030130 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-356408P	20020212 (60)
	US 2002-380185P	20020510 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, Esq., NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051	
NUMBER OF CLAIMS:	80	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	4 Drawing Page(s)	
LINE COUNT:	1967	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor fragments eliciting a hypersensitive response and uses thereof  
AB Isolated fragments of an Erwinia **hypersensitive response elicitor protein** or polypeptide that elicit a hypersensitive response in plants and isolated DNA molecules that encode those fragments are disclosed. Isolated fragments of hypersensitive response elicitor proteins or polypeptides, which elicit a hypersensitive response, and the isolated DNA molecules that encode them can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants, either by applying the hypersensitive response eliciting fragments to plants or plant seeds or by providing transgenic plants or plant seeds transformed with a DNA molecule encoding a hypersensitive response eliciting **fragment**.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:259630 USPATFULL  
TITLE: Hypersensitive response elicitor fragments eliciting a hypersensitive response and uses thereof  
INVENTOR(S): Laby, Ron J., Houston, TX, UNITED STATES

Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
Beer, Steven V., Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003182683	A1	20030925
APPLICATION INFO.:	US 2003-387806	A1	20030312 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-86118, filed on 28 May 1998, GRANTED, Pat. No. US 6583107		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-48109P	19970530 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, Esq., NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051	
NUMBER OF CLAIMS:	27	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2718	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L1 ANSWER 4 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor-induced stress resistance  
AB The present invention is directed to imparting stress resistance to plants. This can be achieved by applying a hypersensitive response elicitor in a non-infectious form to plants or plant seeds under conditions effective to impart stress resistance to plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding the elicitor can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart stress resistance to plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:253622 USPATFULL  
TITLE: Hypersensitive response elicitor-induced stress resistance  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, United States  
Schading, Richard L., West Melbourne, FL, United States  
PATENT ASSIGNEE(S): Eden Bioscience Corporation, Bothell, WA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6624139	B1	20030923
APPLICATION INFO.:	US 1999-431614		19991102 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-107243P	19981105 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Low, Christopher S. F.	
ASSISTANT EXAMINER:	Kam, Chih-Min	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	14	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	3122	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L1 ANSWER 5 OF 26 USPATFULL on STN

TI Receptors for hypersensitive response elicitors and uses thereof  
AB The present invention is directed to an isolated protein which serves as a receptor in plants for a plant pathogen hypersensitive response elicitor. Also disclosed are nucleic acid molecules encoding such receptors as well as expression vectors, host cells, transgenic plants, and transgenic plant seeds containing such nucleic acid molecules. Both the protein and nucleic acid can be used to identify agents targeting plant cells to enhance a plant's receptivity to treatment with a hypersensitive response elicitor and to directly impart plant growth enhancement as well as resistance against disease, insects, and stress.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:252735 USPATFULL  
TITLE: Receptors for hypersensitive response elicitors and uses thereof  
INVENTOR(S): Song, Xiaoling, Woodinville, WA, UNITED STATES  
Bariola, Pauline Anne, Seattle, WA, UNITED STATES  
Linderoth, Nora Abiella, Kenmore, WA, UNITED STATES  
Fan, Hao, Bothell, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003177526	A1	20030918
APPLICATION INFO.:	US 2002-174209	A1	20020617 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-810997, filed on 16 Mar 2001, ABANDONED		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-335776P	20011031 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	130	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	19 Drawing Page(s)	
LINE COUNT:	4394	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 6 OF 26 USPATFULL on STN

TI Methods of inhibiting desiccation of cuttings removed from ornamental plants  
AB Disclosed are methods of inhibiting desiccation of cuttings from ornamental plants, methods of harvesting cuttings from ornamental plants, methods of promoting early flowering of ornamental plants, and methods of enhancing the longevity of flower blooms on ornamental plant cuttings. The ornamental plants can be transgenic plants which express a heterologous **hypersensitive response elicitor protein** or polypeptide or the ornamental plants can be treated via topical application with a **hypersensitive response elicitor protein** or polypeptide. Alternatively, cuttings from the ornamental plant can be treated with a **hypersensitive response elicitor protein** or polypeptide, independent of any treatment provided to the ornamental plant from which the cutting is removed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:153311 USPATFULL  
TITLE: Methods of inhibiting desiccation of cuttings removed from ornamental plants  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, UNITED STATES



Leon, Ernesto, Coyacan, MEXICO  
Oviedo, Agustin, Celaya, MEXICO

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003104979	A1	20030605
APPLICATION INFO.:	US 2001-10390	A1	20011105 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-248169P	20001113 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	85	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Page(s)	
LINE COUNT:	2453	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 7 OF 26 USPATFULL on STN  
TI Method of imparting drought resistance to plants  
AB The present invention relates to a method of enhancing growth of plants.  
This involves applying a hypersensitive response elicitor polypeptide or  
protein in a non-infectious form to a plant or plant seed under  
conditions effective to enhance growth of the plant or plants produced  
from the plant seed. Alternatively, transgenic plants or transgenic  
plant seeds transformed with a DNA molecule encoding a hypersensitive  
response elicitor polypeptide or protein can be provided and the  
transgenic plants or plants resulting from the transgenic plant seeds  
are grown under conditions effective to enhance plant growth.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:39269 USPATFULL  
TITLE: Method of imparting drought resistance to plants  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003028918	A1	20030206
APPLICATION INFO.:	US 2001-34158	A1	20011220 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-597840, filed on 20 Jun 2000, PENDING Division of Ser. No. US 1998-13587, filed on 26 Jan 1998, GRANTED, Pat. No. US 6277814		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-36048P	19970127 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Page(s)	
LINE COUNT:	2529	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 8 OF 26 USPATFULL on STN  
TI Hypersensitive response induced resistance in plants by seed treatment  
AB The present invention relates to a method of imparting pathogen  
resistance to plants. This involves applying a hypersensitive response  
elicitor polypeptide or protein in a non-infectious form to a plant seed

under conditions where the polypeptide or protein contacts cells of the plant seed. The present invention is also directed to a pathogen resistance imparting plant seed. Alternatively, transgenic plant seeds containing a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be planted in soil and a plant can be propagated from the planted seed under conditions effective to impart pathogen resistance to the plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:215336 USPATFULL  
TITLE: Hypersensitive response induced resistance in plants by seed treatment  
INVENTOR(S): Qiu, Dwen, Seattle, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
Beer, Steven V., Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002116733	A1	20020822
APPLICATION INFO.:	US 2001-766348	A1	20010119 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1997-984207, filed on 3 Dec 1997, GRANTED, Pat. No. US 6235974		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-33230P	19961205 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	65	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2253	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 9 OF 26 USPATFULL on STN

TI Oomycete-resistant transgenic plants by virtue of pathogen-induced expression of a heterologous hypersensitive response elicitor

AB The present invention relates to a chimeric gene that includes a first DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide, a promoter operably linked 5' to the first DNA molecule to induce transcription of the first DNA molecule in response to activation of the promoter by an oomycete, and a 3' regulatory region operably linked to the first DNA molecule. Also disclosed are an expression system and a host cell containing the chimeric gene. The present invention also relates to a transgenic plant resistant to disease resulting from oomycete infection, the transgenic plant including the chimeric gene, wherein the promoter induces transcription of the first DNA molecule in response to infection of the plant by an oomycete. Transgenic seeds and transgenic cultivars obtained from the transgenic plant are also disclosed. Additional aspects of the present invention include methods of making a recombinant plant cell and a transgenic plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:134573 USPATFULL  
TITLE: Oomycete-resistant transgenic plants by virtue of pathogen-induced expression of a heterologous hypersensitive response elicitor  
INVENTOR(S): Beer, Steven V., Ithaca, NY, UNITED STATES  
Bauer, David W., Kirkland, WA, UNITED STATES

NUMBER	KIND	DATE
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PATENT INFORMATION: US 2002069434 A1 20020606  
APPLICATION INFO.: US 2001-770693 A1 20010126 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-178565P	20000126 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	72	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	6 Drawing Page(s)	
LINE COUNT:	2150	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		

L1 ANSWER 10 OF 26 USPATFULL on STN

TI Hypersensitive response eliciting domains and use thereof  
AB The present invention is directed to the structure of an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated nucleic acid molecule which encodes the hypersensitive response eliciting protein or polypeptide. This protein or polypeptide has an acid portion linked to an alpha helix or a pair of spaced apart domains comprising an acidic portion linked to an alpha-helix. This isolated protein or polypeptide and the isolated nucleic acid molecule can be used to impart disease resistance to plants, to enhance plant growth, to control insects, and/or to impart stress resistance to plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, to control insects, and/or to impart stress resistance to plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a nucleic acid molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, to control insects, and/or to impart stress resistance to plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:120510 USPATFULL  
TITLE: Hypersensitive response eliciting domains and use thereof  
INVENTOR(S): Fan, Hao, Bothell, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002062500	A1	20020523
APPLICATION INFO.:	US 2001-879248	A1	20010612 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-212211P	20000616 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	92	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	

LINE COUNT: 3425  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 11 OF 26 USPATFULL on STN  
TI Methods of improving the effectiveness of transgenic plants  
AB The present invention relates to methods of improving the effectiveness of transgenic plants, either by maximizing the benefit of a transgenic trait in transgenic plants or overcoming deleterious effects on growth, stress tolerance, disease resistance, or insect resistance in transgenic plants expressing a transgenic trait. By applying a **hypersensitive response elicitor protein** or polypeptide to a transgenic plant expressing a transgene which confers a transgenic trait, or by preparing a transgenic plant expressing both a transgene which confers a transgenic trait and a second transgene which confers hypersensitive response elicitor expression, it is possible to realize the maximum benefit of the transgenic trait or overcome deleterious effects on growth, stress tolerance, disease resistance, or insect resistance which result from or accompany expression of the transgene conferring the transgenic trait.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:113909 USPATFULL  
TITLE: Methods of improving the effectiveness of transgenic plants  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
DeRocher, Jay Ernest, Bothell, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002059658	A1	20020516
APPLICATION INFO.:	US 2001-880371	A1	20010613 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-211585P	20000615 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	74	
EXEMPLARY CLAIM:	1	
LINE COUNT:	3046	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 12 OF 26 USPATFULL on STN  
TI Treatment of fruits or vegetables with hypersensitive response elicitor to inhibit postharvest disease or desiccation  
AB The present invention relates to a methods of inhibiting postharvest disease or desiccation in a fruit or vegetable, either by treating a fruit or vegetable with a **hypersensitive response elicitor protein** or polypeptide under conditions effective to inhibit postharvest disease or desiccation, or by providing a transgenic plant or plant seed transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein and growing the transgenic plant or transgenic plant produced from the transgenic plant seed under conditions effective to inhibit a postharvest disease or desiccation in a fruit or vegetable harvested from the transgenic plant. Also disclosed are DNA constructs and expression systems, host cells, and transgenic plants containing the DNA construct.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:32515 USPATFULL  
TITLE: Treatment of fruits or vegetables with hypersensitive

response elicitor to inhibit postharvest disease or desiccation

INVENTOR(S) :

Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
Qiu, Dewen, Seattle, WA, UNITED STATES  
Remick, Dean, Lake Placid, FL, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002019337	A1	20020214
APPLICATION INFO.:	US 2001-835684	A1	20010416 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-198359P	20000419 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	50	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2680	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 13 OF 26 USPATFULL on STN

TI Receptors for hypersensitive response elicitors and uses thereof  
AB The present invention is directed to an isolated protein which serves as a receptor in plants for a plant pathogen hypersensitive response elicitor. Also disclosed are nucleic acid molecules encoding such receptors as well as expression vectors, host cells, transgenic plants, and transgenic plant seeds containing such nucleic acid molecules. Both the protein and nucleic acid can be used to identify agents targeting plant cells to enhance a plant's receptivity to treatment with a hypersensitive response elicitor and to directly impart plant growth enhancement as well as resistance against disease, insects, and stress.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:13115 USPATFULL  
TITLE: Receptors for hypersensitive response elicitors and uses thereof  
INVENTOR(S) : Song, Xiaoling, Woodinville, WA, UNITED STATES  
Fan, Hao, Bothell, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002007501	A1	20020117
APPLICATION INFO.:	US 2001-810997	A1	20010316 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-191649P	20000323 (60)
	US 2000-250710P	20001201 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	110	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	2322	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 14 OF 26 USPATFULL on STN

TI Enhancement of growth in plants

AB The present invention relates to a method of enhancing growth of plants. This involves applying a hypersensitive response elicitor polypeptide or protein in a non-infectious form to a plant or plant seed under conditions effective to enhance growth of the plant or plants produced from the plant seed. Alternatively, transgenic plants or transgenic plant seeds transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to enhance plant growth.

ACCESSION NUMBER: 2001:136618 USPATFULL  
TITLE: Enhancement of growth in plants  
INVENTOR(S): Qiu, Dwen, Seattle, WA, United States  
Wei, Zhong-Min, Kirkland, WA, United States  
Beer, Steven V., Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6277814	B1	20010821
APPLICATION INFO.:	US 1998-13587		19980126 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-36048P	19970127 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Benzion, Gary	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	35	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 2 Drawing Page(s)	
LINE COUNT:	2631	

L1 ANSWER 15 OF 26 USPATFULL on STN

TI HYPERSENSITIVE RESPONSE ELICITOR FRAGMENTS ELICITING A HYPERSENSITIVE RESPONSE AND USES THEREOF

AB The present invention is directed to isolated fragments of an *Erwinia* **hypersensitive response elicitor protein** or polypeptide which fragments elicit a hypersensitive response in plants. Also disclosed are isolated DNA molecules which encode the *Erwinia* hypersensitive response eliciting **fragment**. Isolated fragments of hypersensitive response elicitor proteins or polypeptides, which elicit a hypersensitive response, and the isolated DNA molecules that encode them can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the hypersensitive response eliciting fragments in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a hypersensitive response eliciting **fragment** can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:123871 USPATFULL  
TITLE: HYPERSENSITIVE RESPONSE ELICITOR FRAGMENTS ELICITING A HYPERSENSITIVE RESPONSE AND USES THEREOF  
INVENTOR(S): LABY, RON J., HOUSTON, TX, United States  
WEI, ZHONG-MIN, KIRKLAND, WA, United States

BEER, STEVEN V., ITHACA, NY, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001011380	A1	20010802
	US 6583107	B2	20030624
APPLICATION INFO.:	US 1998-86118	A1	19980528 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-48109P	19970530 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MICHAEL L GOLDMAN, NIXON PEABODY LLP, CLINTON SQUARE P O BOX 31051, ROCHESTER, NY, 14603	
NUMBER OF CLAIMS:	43	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2791	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 16 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor from Erwinia amylovora and its use  
AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:112284 USPATFULL  
TITLE: Hypersensitive response elicitor from Erwinia amylovora and its use  
INVENTOR(S): Kim, Jihyun Francis, Ithaca, NY, United States  
Beer, Steven V., Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6262018	B1	20010717
APPLICATION INFO.:	US 1998-120927		19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55108P	19970806 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	

NUMBER OF CLAIMS: 6  
EXEMPLARY CLAIM: 1,5  
NUMBER OF DRAWINGS: 9 Drawing Figure(s); 5 Drawing Page(s)  
LINE COUNT: 1712  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 17 OF 26 USPATFULL on STN

TI Hypersensitive response induced resistance in plants by seed treatment with a hypersensitive response elicitor  
AB The present invention relates to a method of imparting pathogen resistance to plants. This involves applying a hypersensitive response elicitor polypeptide or protein in a non-infectious form to a plant seed under conditions where the polypeptide or protein contacts cells of the plant seed. The present invention is also directed to a pathogen resistance imparting plant seed. Alternatively, transgenic plant seeds containing a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be planted in soil and a plant can be propagated from the planted seed under conditions effective to impart pathogen resistance to the plant.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:75626 USPATFULL  
TITLE: Hypersensitive response induced resistance in plants by seed treatment with a hypersensitive response elicitor  
INVENTOR(S): Qiu, Dwen, Seattle, WA, United States  
Wei, Zhong-Min, Kirkland, WA, United States  
Beer, Steven V., Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6235974	B1	20010522
APPLICATION INFO.:	US 1997-984207		19971203 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-33230P	19961205 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Hutzell, Paula	
ASSISTANT EXAMINER:	Zaghmout, Ousama M-Faiz	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	36	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2162	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 18 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor from Erwinia amylovora, its use, and encoding gene  
AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor**



protein or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:67455 USPATFULL  
TITLE: Hypersensitive response elicitor from Erwinia amylovora, its use, and encoding gene  
INVENTOR(S): Bogdanove, Adam J., Ithaca, NY, United States  
Kim, Jihyun Francis, Ithaca, NY, United States  
Wei, Zhong-Min, Kirkland, WA, United States  
Beer, Steven V., Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228644	B1	20010508
APPLICATION INFO.:	US 1998-120663		19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55106P	19970806 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama M-Fuiz	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	16	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Figure(s); 5 Drawing Page(s)	
LINE COUNT:	2237	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 19 OF 26 USPATFULL on STN  
TI Elicitor of the hypersensitive response in plants  
AB The nucleic acid and amino acid sequences for proteinaceous elicitors of the plant defense reaction known as the hypersensitive response are described along with methods for preparation and processes for inactivation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:7884 USPATFULL  
TITLE: Elicitor of the hypersensitive response in plants  
INVENTOR(S): Beer, Steven V., Ithaca, NY, United States  
Wei, Zhong-Min, Ithaca, NY, United States  
Bauer, David W., Ithaca, NY, United States  
Collmer, Alan, Ithaca, NY, United States  
He, Sheng-Yang, Ithaca, NY, United States  
Laby, Ron, Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6174717	B1	20010116
APPLICATION INFO.:	US 1997-851376		19970505 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-200724, filed on 23 Feb 1994, now patented, Pat. No. US 5849868 Continuation of Ser. No. US 1992-907935, filed on 1 Jul 1992, now abandoned		
DOCUMENT TYPE:	Utility		

FILE SEGMENT: Granted  
PRIMARY EXAMINER: Bui, Phuong T.  
LEGAL REPRESENTATIVE: Nixon Pebody LLP  
NUMBER OF CLAIMS: 22  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)  
LINE COUNT: 1494  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 20 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor from Pseudomonas syringae and its use  
AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:4858 USPATFULL  
TITLE: Hypersensitive response elicitor from Pseudomonas syringae and its use  
INVENTOR(S): Collmer, Alan, Ithaca, NY, United States  
Charkowski, Amy, Oakland, CA, United States  
Alfano, James R., Simi Valley, CA, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6172184	B1	20010109
APPLICATION INFO.:	US 1998-120817		19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55107P	19970806 (60)
DOCUMENT TYPE:	Patent	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama M-Faiz	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	1712	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 21 OF 26 USPATFULL on STN

TI Hypersensitive response elicitor from Erwinia chrysanthemi  
AB The present invention relates to an isolated protein or polypeptide corresponding to a protein or polypeptide in Erwinia chrysanthemi which elicits a hypersensitive response in plants. The encoding DNA molecule

alone in isolated form or either in an expression system, a host cell, or a transgenic plant are also disclosed. Another aspect of the present invention relates to a method of imparting pathogen resistance to plants by transforming a plant with the DNA molecule of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1999:163814 USPATFULL  
TITLE: Hypersensitive response elicitor from Erwinia chrysanthemi  
INVENTOR(S): Bauer, David, Ithaca, NY, United States  
Collmer, Alan, Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6001959		19991214
APPLICATION INFO.:	US 1998-118959		19980717 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1995-484358, filed on 7 Jun 1995, now patented, Pat. No. US 5850015		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Smith, Lynette R. F.		
ASSISTANT EXAMINER:	Haas, Thomas		
LEGAL REPRESENTATIVE:	Nixon Peabody LLP		
NUMBER OF CLAIMS:	5		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 6 Drawing Page(s)		
LINE COUNT:	1716		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 22 OF 26 USPATFULL on STN

TI Insect control with a hypersensitive response elicitor  
AB The present invention relates to a method of controlling insects on plants. This involves applying a hypersensitive response elicitor polypeptide or protein in a non-infectious form to a plant or plant seed under conditions effective to control insects on the plant or plants produced from the plant seed. Alternatively, transgenic plants or transgenic plant seeds transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to control insects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1999:137209 USPATFULL  
TITLE: Insect control with a hypersensitive response elicitor  
INVENTOR(S): Zitter, Thomas A., Ithaca, NY, United States  
Wei, Zhong-Min, Kirkland, WA, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)  
EDEN Bioscience, Bothell, WA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5977060		19991102
APPLICATION INFO.:	US 1998-30270		19980225 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-39226P	19970228 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Degen, Nancy	

ASSISTANT EXAMINER: Yucel, Irem  
LEGAL REPRESENTATIVE: Nixon, Hargrave, Devans & Doyle LLP  
NUMBER OF CLAIMS: 49  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 2 Drawing Page(s)  
LINE COUNT: 2362  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 23 OF 26 USPATFULL on STN  
TI Hypersensitive response elicitor from Erwinia chrysanthemi  
AB The present invention relates to an isolated protein or polypeptide corresponding to a protein or polypeptide in Erwinia chrysanthemi which elicits a hypersensitive response in plants. The encoding DNA molecule alone in isolated form or either in an expression system, a host cell, or a transgenic plant are also disclosed. Another aspect of the present invention relates to a method of imparting pathogen resistance to plants by transforming a plant with the DNA molecule of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:157611 USPATFULL  
TITLE: Hypersensitive response elicitor from Erwinia chrysanthemi  
INVENTOR(S): Bauer, David, Ithaca, NY, United States  
Collmer, Alan, Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5850015		19981215
APPLICATION INFO.:	US 1995-484358		19950607 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Robinson, Douglas W.		
ASSISTANT EXAMINER:	Haas, Thomas		
LEGAL REPRESENTATIVE:	Nixon, Hargrave, Devans & Doyle LLP		
NUMBER OF CLAIMS:	19		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 6 Drawing Page(s)		
LINE COUNT:	1625		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 24 OF 26 USPATFULL on STN  
TI Elicitor of the hypersensitive response in plants  
AB The nucleic acid and amino acid sequences for proteinaceous elicitors of the plant defense reaction known as the hypersensitive response are described along with methods for preparation and processes for inactivation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:157468 USPATFULL  
TITLE: Elicitor of the hypersensitive response in plants  
INVENTOR(S): Beer, Steven V., Ithaca, NY, United States  
Wei, Zhong-Min, Ithaca, NY, United States  
Bauer, David W., Ithaca, NY, United States  
Collmer, Alan, Ithaca, NY, United States  
He, Sheng-Yang, Ithaca, NY, United States  
Laby, Ron, Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5849868		19981215

APPLICATION INFO.: US 1994-200724 19940223 (8)  
 RELATED APPLN. INFO.: Continuation of Ser. No. US 1992-907935, filed on 1 Jul 1992, now abandoned  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Minnifield, Nita  
 LEGAL REPRESENTATIVE: Nixon, Hargrave, Devans & Doyle  
 NUMBER OF CLAIMS: 11  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)  
 LINE COUNT: 1467  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 25 OF 26 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN  
 TI New fragments of an Erwinia **hypersensitive response elicitor protein** and related DNA - used to impart disease resistance to plants, to increase their growth and to control insects.  
 AN 1999-070210 [06] WPIDS  
 AB WO 9854214 A UPAB: 19990224  
 Isolated **fragment (I)** of an Erwinia **hypersensitive response elicitor protein** or polypeptide (A) able to elicit a hypersensitive response in plants is new. Also new are: (1) isolated DNA (II) encoding (I); and (2) expression systems, host cells and transgenic plants (or their seeds) containing (II).  
 USE - (I), in non-infectious form, is applied to plants to impart disease resistance (to a wide range of viral, bacterial and fungal pathogens), to improve growth (yield, quantity and quality of seeds, to provide earlier germination etc.) and/or to control insects (e.g. corn borers, Lepidoptera larvae etc.) The same results are provided by transgenic plants expressing (I).  
 Dwg.0/11  
 ACCESSION NUMBER: 1999-070210 [06] WPIDS  
 DOC. NO. CPI: C1999-020744  
 TITLE: New fragments of an Erwinia **hypersensitive response elicitor protein** and related DNA - used to impart disease resistance to plants, to increase their growth and to control insects.  
 DERWENT CLASS: C06 D16  
 INVENTOR(S): BEER, S V; LABY, R J; WEI, Z  
 PATENT ASSIGNEE(S): (CORR) CORNELL RES FOUND INC; (EDEN-N) EDEN BIOSCIENCE CORP; (BEER-I) BEER S V; (LABY-I) LABY R J; (WEIZ-I) WEI Z  
 COUNTRY COUNT: 83  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9854214	A2	19981203	(199906)*	EN	94
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL					
OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE					
GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG					
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG					
UZ VN YU ZW					
AU 9877004	A	19981230	(199918)		
FI 9902545	A	20000128	(200020)		
EP 996729	A2	20000503	(200026)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
BR 9809699	A	20000711	(200041)		
CN 1265145	A	20000830	(200059)		
US 2001011380	A1	20010802	(200147)		
KR 2001013226	A	20010226	(200154)		
JP 2002501388	W	20020115	(200207)		109

MX 9911007 A1 20010601 (200235)  
 AU 750732 B 20020725 (200260)  
 NZ 501138 A 20021122 (200301)  
 US 6583107 B2 20030624 (200343)  
 US 2003182683 A1 20030925 (200364)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9854214	A2	WO 1998-US10874	19980528
AU 9877004	A	AU 1998-77004	19980528
FI 9902545	A	WO 1998-US10874	19980528
		FI 1999-2545	19991129
EP 996729	A2	EP 1998-924950	19980528
		WO 1998-US10874	19980528
BR 9809699	A	BR 1998-9699	19980528
		WO 1998-US10874	19980528
CN 1265145	A	CN 1998-807613	19980528
US 2001011380	A1 Provisional	US 1997-48109P	19970530
		US 1998-86118	19980528
KR 2001013226	A	KR 1999-711216	19991130
JP 2002501388	W	WO 1998-US10874	19980528
		JP 1999-500902	19980528
MX 9911007	A1	MX 1999-11007	19991129
AU 750732	B	AU 1998-77004	19980528
NZ 501138	A	NZ 1998-501138	19980528
		WO 1998-US10874	19980528
US 6583107	B2 Provisional	US 1997-48109P	19970530
		US 1998-86118	19980528
US 2003182683	A1 Provisional	US 1997-48109P	19970530
	Div ex	US 1998-86118	19980528
		US 2003-387806	20030312

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9877004	A Based on	WO 9854214
EP 996729	A2 Based on	WO 9854214
BR 9809699	A Based on	WO 9854214
JP 2002501388	W Based on	WO 9854214
AU 750732	B Previous Publ.	AU 9877004
	Based on	WO 9854214
NZ 501138	A Based on	WO 9854214
US 2003182683	A1 Div ex	US 6583107

PRIORITY APPLN. INFO: US 1997-48109P 19970530; US 1998-86118  
 19980528; US 2003-387806 20030312

L1 ANSWER 26 OF 26 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 TI Hypersensitive response elicitor fragments eliciting a hypersensitive  
 response and uses thereof.  
 AB The present invention is directed to isolated fragments of an *Erwinia*  
**hypersensitive response elicitor**  
**protein** or polypeptide which fragments elicit a hypersensitive  
 response in plants. Also disclosed are isolated DNA molecules which  
 encode the *Erwinia* hypersensitive response eliciting **fragment**.  
 Isolated fragments of hypersensitive response elicitor proteins or  
 polypeptides, which elicit a hypersensitive response, and the isolated DNA  
 molecules that encode them can be used to impart disease resistance to  
 plants, to enhance plant growth, and/or to control insects on plants.  
 This can be achieved by applying the hypersensitive response eliciting  
 fragments in a non-infectious form to plants or plant seeds under

conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a hypersensitive response eliciting fragment can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

ACCESSION NUMBER: 2003:345742 BIOSIS  
DOCUMENT NUMBER: PREV200300345742  
TITLE: Hypersensitive response elicitor fragments eliciting a hypersensitive response and uses thereof.  
AUTHOR(S): Laby, Ron J. [Inventor, Reprint Author]; Wei, Zhong-Min [Inventor]; Beer, Steven V. [Inventor]  
CORPORATE SOURCE: Houston, TX, USA  
ASSIGNEE: Cornell Research Foundation, Inc.  
PATENT INFORMATION: US 6583107 June 24, 2003  
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (June 24 2003) Vol. 1271, No. 4.  
<http://www.uspto.gov/web/menu/patdata.html>. e-file.  
ISSN: 0098-1133 (ISSN print).  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
ENTRY DATE: Entered STN: 23 Jul 2003  
Last Updated on STN: 23 Jul 2003

=> s plant growth enhancement and l1  
L2 11 PLANT GROWTH ENHANCEMENT AND L1

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L2 ANSWER 1 OF 11 USPATFULL on STN  
TI Pseudomonas syringae harpins, HopPtoP and HopPmaHpto, and their uses  
AB The present invention is directed to isolated proteins or polypeptides which elicit a hypersensitive response in plants, as well as isolated DNA molecules which encode the hypersensitive response eliciting proteins or polypeptides. These isolated proteins or polypeptides and the isolated DNA molecules can be used to impart disease resistance, stress resistance, and enhanced growth to plants or plants grown from treated seeds, to control insects on plants or plants grown from treated plant seeds, to impart post-harvest disease or desiccation resistance in fruits or vegetables, to impart enhanced longevity of fruit or vegetable ripeness, to impart desiccation resistance to cuttings of ornamental plants, and/or promote early flowering of ornamental plants, either by topical application of the proteins or polypeptides or transgenic expression in recombinant plants or plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:8546 USPATFULL  
TITLE: Pseudomonas syringae harpins, HopPtoP and HopPmaHpto, and their uses  
INVENTOR(S): Collmer, Alan, Ithaca, NY, UNITED STATES  
Ramos, Adela, Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004006789	A1	20040108
APPLICATION INFO.:	US 2003-355956	A1	20030130 (10)

NUMBER	DATE
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PRIORITY INFORMATION: US 2002-356408P 20020212 (60)  
 US 2002-380185P 20020510 (60)  
 DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: Michael L. Goldman, Esq., NIXON PEABODY LLP, Clinton  
 Square, P.O. Box 31051, Rochester, NY, 14603-1051  
 NUMBER OF CLAIMS: 80  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 4 Drawing Page(s)  
 LINE COUNT: 1967  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 2 OF 11 USPATFULL on STN.

TI Hypersensitive response elicitor fragments eliciting a hypersensitive  
 response and uses thereof  
 AB Isolated fragments of an Erwinia **hypersensitive  
 response elicitor protein** or polypeptide  
 that elicit a hypersensitive response in plants and isolated DNA  
 molecules that encode those fragments are disclosed. Isolated fragments  
 of hypersensitive response elicitor proteins or polypeptides, which  
 elicit a hypersensitive response, and the isolated DNA molecules that  
 encode them can be used to impart disease resistance to plants, to  
 enhance plant growth, and/or to control insects on plants, either by  
 applying the hypersensitive response eliciting fragments to plants or  
 plant seeds or by providing transgenic plants or plant seeds transformed  
 with a DNA molecule encoding a hypersensitive response eliciting  
**fragment.**

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:259630 USPATFULL  
 TITLE: Hypersensitive response elicitor fragments eliciting a  
 hypersensitive response and uses thereof  
 INVENTOR(S): Laby, Ron J., Houston, TX, UNITED STATES  
 Wei, Zhong-Min, Kirkland, WA, UNITED STATES  
 Beer, Steven V., Ithaca, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003182683	A1	20030925
APPLICATION INFO.:	US 2003-387806	A1	20030312 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-86118, filed on 28 May 1998, GRANTED, Pat. No. US 6583107		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-48109P	19970530 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, Esq., NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603-1051	
NUMBER OF CLAIMS:	27	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2718	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 3 OF 11 USPATFULL on STN

TI Receptors for hypersensitive response elicitors and uses thereof  
 AB The present invention is directed to an isolated protein which serves as  
 a receptor in plants for a plant pathogen hypersensitive response  
 elicitor. Also disclosed are nucleic acid molecules encoding such  
 receptors as well as expression vectors, host cells, transgenic plants,  
 and transgenic plant seeds containing such nucleic acid molecules. Both  
 the protein and nucleic acid can be used to identify agents targeting



plant cells to enhance a plant's receptivity to treatment with a hypersensitive response elicitor and to directly impart plant growth enhancement as well as resistance against disease, insects, and stress.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:252735 USPATFULL  
TITLE: Receptors for hypersensitive response elicitors and uses thereof  
INVENTOR(S): Song, Xiaoling, Woodinville, WA, UNITED STATES  
Bariola, Pauline Anne, Seattle, WA, UNITED STATES  
Linderoth, Nora Abiella, Kenmore, WA, UNITED STATES  
Fan, Hao, Bothell, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003177526	A1	20030918
APPLICATION INFO.:	US 2002-174209	A1	20020617 (10)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 2001-810997, filed on 16 Mar 2001, ABANDONED		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-335776P	20011031 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	130	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	19 Drawing Page(s)	
LINE COUNT:	4394	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 4 OF 11 USPATFULL on STN

TI Method of imparting drought resistance to plants  
AB The present invention relates to a method of enhancing growth of plants. This involves applying a hypersensitive response elicitor polypeptide or protein in a non-infectious form to a plant or plant seed under conditions effective to enhance growth of the plant or plants produced from the plant seed. Alternatively, transgenic plants or transgenic plant seeds transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to enhance plant growth.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:39269 USPATFULL  
TITLE: Method of imparting drought resistance to plants  
INVENTOR(S): Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003028918	A1	20030206
APPLICATION INFO.:	US 2001-34158	A1	20011220 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2000-597840, filed on 20 Jun 2000, PENDING Division of Ser. No. US 1998-13587, filed on 26 Jan 1998, GRANTED, Pat. No. US 6277814		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-36048P	19970127 (60)
DOCUMENT TYPE:	Utility	

FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: Michael L. Goldman, NIXON PEABODY LLP, Clinton Square,  
P.O. Box 31051, Rochester, NY, 14603  
NUMBER OF CLAIMS: 9  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 2 Drawing Page(s)  
LINE COUNT: 2529  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 5 OF 11 USPATFULL on STN

TI Hypersensitive response eliciting domains and use thereof  
AB The present invention is directed to the structure of an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated nucleic acid molecule which encodes the hypersensitive response eliciting protein or polypeptide. This protein or polypeptide has an acid portion linked to an alpha helix or a pair of spaced apart domains comprising an acidic portion linked to an alpha-helix. This isolated protein or polypeptide and the isolated nucleic acid molecule can be used to impart disease resistance to plants, to enhance plant growth, to control insects, and/or to impart stress resistance to plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, to control insects, and/or to impart stress resistance to plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a nucleic acid molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, to control insects, and/or to impart stress resistance to plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:120510 USPATFULL  
TITLE: Hypersensitive response eliciting domains and use thereof  
INVENTOR(S): Fan, Hao, Bothell, WA, UNITED STATES  
Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002062500	A1	20020523
APPLICATION INFO.:	US 2001-879248	A1	20010612 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-212211P	20000616 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	92	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	3425	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 6 OF 11 USPATFULL on STN

TI Receptors for hypersensitive response elicitors and uses thereof  
AB The present invention is directed to an isolated protein which serves as a receptor in plants for a plant pathogen hypersensitive response

elicitor. Also disclosed are nucleic acid molecules encoding such receptors as well as expression vectors, host cells, transgenic plants, and transgenic plant seeds containing such nucleic acid molecules. Both the protein and nucleic acid can be used to identify agents targeting plant cells to enhance a plant's receptivity to treatment with a hypersensitive response elicitor and to directly impart **plant growth enhancement** as well as resistance against disease, insects, and stress.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:13115 USPATFULL  
 TITLE: Receptors for hypersensitive response elicitors and uses thereof  
 INVENTOR(S): Song, Xiaoling, Woodinville, WA, UNITED STATES  
 Fan, Hao, Bothell, WA, UNITED STATES  
 Wei, Zhong-Min, Kirkland, WA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002007501	A1	20020117
APPLICATION INFO.:	US 2001-810997	A1	20010316 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-191649P	20000323 (60)
	US 2000-250710P	20001201 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	Michael L. Goldman, NIXON PEABODY LLP, Clinton Square, P.O. Box 31051, Rochester, NY, 14603	
NUMBER OF CLAIMS:	110	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	12 Drawing Page(s)	
LINE COUNT:	2322	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 7 OF 11 USPATFULL on STN

TI Enhancement of growth in plants

AB The present invention relates to a method of enhancing growth of plants. This involves applying a hypersensitive response elicitor polypeptide or protein in a non-infectious form to a plant or plant seed under conditions effective to enhance growth of the plant or plants produced from the plant seed. Alternatively, transgenic plants or transgenic plant seeds transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to enhance plant growth.

ACCESSION NUMBER: 2001:136618 USPATFULL  
 TITLE: Enhancement of growth in plants  
 INVENTOR(S): Qiu, Dewen, Seattle, WA, United States  
 Wei, Zhong-Min, Kirkland, WA, United States  
 Beer, Steven V., Ithaca, NY, United States  
 PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6277814	B1	20010821
APPLICATION INFO.:	US 1998-13587		19980126 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-36048P	19970127 (60)

DOCUMENT TYPE: Utility  
FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Benzion, Gary  
LEGAL REPRESENTATIVE: Nixon Peabody LLP  
NUMBER OF CLAIMS: 35  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)  
LINE COUNT: 2631

L2 ANSWER 8 OF 11 USPATFULL on STN

TI HYPERSENSITIVE RESPONSE ELICITOR FRAGMENTS ELICITING A HYPERSENSITIVE RESPONSE AND USES THEREOF

AB The present invention is directed to isolated fragments of an *Erwinia hypersensitive response elicitor protein* or polypeptide which fragments elicit a hypersensitive response in plants. Also disclosed are isolated DNA molecules which encode the *Erwinia hypersensitive response eliciting fragment*. Isolated fragments of hypersensitive response elicitor proteins or polypeptides, which elicit a hypersensitive response, and the isolated DNA molecules that encode them can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the hypersensitive response eliciting fragments in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a hypersensitive response eliciting **fragment** can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:123871 USPATFULL  
TITLE: HYPERSENSITIVE RESPONSE ELICITOR FRAGMENTS ELICITING A HYPERSENSITIVE RESPONSE AND USES THEREOF  
INVENTOR(S): LABY, RON J., HOUSTON, TX, United States  
WEI, ZHONG-MIN, KIRKLAND, WA, United States  
BEER, STEVEN V., ITHACA, NY, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001011380	A1	20010802
	US 6583107	B2	20030624
APPLICATION INFO.:	US 1998-86118	A1	19980528 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-48109P	19970530 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MICHAEL L GOLDMAN, NIXON PEABODY LLP, CLINTON SQUARE P O BOX 31051, ROCHESTER, NY, 14603	
NUMBER OF CLAIMS:	43	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Page(s)	
LINE COUNT:	2791	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 9 OF 11 USPATFULL on STN

TI Hypersensitive response elicitor from *Erwinia amylovora* and its use

AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein

or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:112284 USPATFULL  
 TITLE: Hypersensitive response elicitor from Erwinia amylovora and its use  
 INVENTOR(S): Kim, Jihyun Francis, Ithaca, NY, United States  
 Beer, Steven V., Ithaca, NY, United States  
 PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6262018	B1	20010717
APPLICATION INFO.:	US 1998-120927		19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55108P	19970806 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1,5	
NUMBER OF DRAWINGS:	9 Drawing Figure(s); 5 Drawing Page(s)	
LINE COUNT:	1712	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 10 OF 11 USPATFULL on STN

TI Hypersensitive response elicitor from Erwinia amylovora, its use, and encoding gene

AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can be used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the

plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:67455 USPATFULL  
TITLE: Hypersensitive response elicitor from Erwinia amylovora, its use, and encoding gene  
INVENTOR(S): Bogdanove, Adam J., Ithaca, NY, United States  
Kim, Jihyun Francis, Ithaca, NY, United States  
Wei, Zhong-Min, Kirkland, WA, United States  
Beer, Steven V., Ithaca, NY, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6228644	B1	20010508
APPLICATION INFO.:	US 1998-120663		19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55106P	19970806 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama M-Fuiz	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	16	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Figure(s); 5 Drawing Page(s)	
LINE COUNT:	2237	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L2 ANSWER 11 OF 11 USPATFULL on STN  
TI Hypersensitive response elicitor from Pseudomonas syringae and its use  
AB The present invention is directed to an isolated protein or polypeptide which elicits a hypersensitive response in plants as well as an isolated DNA molecule which encodes the hypersensitive response eliciting protein or polypeptide. This isolated protein or polypeptide and the isolated DNA molecule can used to impart disease resistance to plants, to enhance plant growth, and/or to control insects on plants. This can be achieved by applying the **hypersensitive response elicitor protein** or polypeptide in a non-infectious form to plants or plant seeds under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds. Alternatively, transgenic plants or plant seeds transformed with a DNA molecule encoding a **hypersensitive response elicitor protein** or polypeptide can be provided and the transgenic plants or plants resulting from the transgenic plant seeds are grown under conditions effective to impart disease resistance, to enhance plant growth, and/or to control insects on plants or plants grown from the plant seeds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2001:4858 USPATFULL  
TITLE: Hypersensitive response elicitor from Pseudomonas syringae and its use  
INVENTOR(S): Collmer, Alan, Ithaca, NY, United States  
Charkowski, Amy, Oakland, CA, United States  
Alfano, James R., Simi Valley, CA, United States  
PATENT ASSIGNEE(S): Cornell Research Foundation, Inc., Ithaca, NY, United States (U.S. corporation)

NUMBER	KIND	DATE
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PATENT INFORMATION: US 6172184 B1 20010109  
APPLICATION INFO.: US 1998-120817 19980722 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-55107P	19970806 (60)
DOCUMENT TYPE:	Patent	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Smith, Lynette R. F.	
ASSISTANT EXAMINER:	Zaghmout, Ousama M-Faiz	
LEGAL REPRESENTATIVE:	Nixon Peabody LLP	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	13 Drawing Figure(s); 3 Drawing Page(s)	
LINE COUNT:	1712	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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E8	1	FANA JIAN/AU
E9	1	FANACHE G/AU
E10	1	FANADARDZHYAN K V/AU
E11	1	FANAEE G/AU
E12	1	FANAEE G H/AU